



## **Educator's Guide to Music Technology**

Educating the next generation of musicians

**M-AUDIO**

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# Introduction

With technology playing an ever-increasing role in the music class, putting together a system that meets the needs of all your students can be quite a challenge. It's not simply about finding the best quality equipment to fit this year's budget, it's about having the ongoing option to build a set of resources that can grow as your students' skills develop. M-Audio music technology allows you to start small and expand as required, so you don't have to feel compromised by budget or space.

Access as much or as little of the functionality as you need at any time. At the simplest level, our keyboard controllers allow younger students to quickly master MIDI basics, without having to navigate layers of data. At the same time, sophisticated controller options provide more advanced students with the potential for detailed refinement of those all-important assignments.

## **Systems that develop with your students**

At the heart of the M-Audio class studio is the computer. Start by adding a keyboard controller and software with a variety of professional sounds and samples, such as Reason. It's all you need for an instant composing and arranging environment, complete with mixing and effects.

Expand into audio recording. Start with a simple built-in audio interface for recording vocals or guitar, or look at the various input and output options provided by a selection of USB, FireWire and PCI interfaces. Add a microphone preamp, or extend the capability of a current M-Audio interface by adding an expander module. With additional microphones and desktop studio monitors you can create the same state-of-the-art facilities in your music classroom or lab that are currently enjoyed by some of the industry's leading artists and producers. Lab packs, multi-licenses and studio packages make building several workstations a reality—even with more limited budgets.

## **Flexible enough to fit the changing demands of your teaching environment**

Need to change teaching rooms at short notice? What if students want to bring in their own laptops to class? Want to use a keyboard as a "live" controller at the next concert? No problem, the M-Audio hardware range was originally designed for the busy musician on the move. It provides flexibility and intuitive connectivity that doesn't require a degree in electronics to figure out—meaning it won't waste valuable teaching time.

We also appreciate the special demands of the educational environment, so in putting together our current educator's product guide, we've considered some basic classroom requirements, matching these to a range of products that are flexible, space-saving, easy to use, quick to set up, and compatible with existing set-ups.

## **One-stop solutions for educators worldwide**

In addition to manufacturing our own product lines of audio interfaces, studio monitors and keyboard controllers, M-Audio distributes other leading software products, providing a one-stop solution to turning your class computers into top quality music production teaching systems.

But don't just take our word for it, read what other music educators have to say about working with our products. We believe in building solid customer relationships right from the start, and look forward to answering any questions you might have about the products listed in this guide, which represent a broad selection from our main portfolio.

Should you require information on other products, or want to check out technical specifications in more depth, please ask for the main M-Audio product catalog, or visit [www.m-audio.com](http://www.m-audio.com).

Affordability

Compatibility

Connectivity

Expandability

Flexibility

Functionality

Portability

Creativity

## Oxygen8 25-key USB MIDI Controller

The perfect music lab solution when space is at a premium. Oxygen8 fits neatly in the individual workstation set-up alongside a computer, powered monitors and other equipment. It's also just as comfortable sitting in a 19" rack in the school studio.

Great for controlling software synths like Reason, with 8 rotary knobs for assigning a range of MIDI parameters. With +/- 4 octave transposition available, Oxygen8 can also double up a live performance resource for student bands or improvisation class.

25 keys (+/- 4 octave transposition)

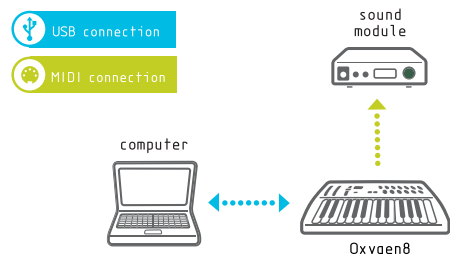
built-in USB MIDI interface

sustain pedal input

8 MIDI-assignable rotary controls

powered by USB bus, batteries or DC power adapter

compatible with: Windows 98SE, 2000, Me, XP.  
Mac OS 9.2.2 or later. OS X or later.



### About Keyboard Controllers



Keyboard controllers do not contain built-in sounds, but when connected via USB or MIDI they allow you to trigger sounds from software-based virtual instruments, hardware modules and sound cards. This makes them suitable for a variety of class activities such as inputting data into sequencing and notation software programs, which can then be played back via a sound card or sound module. Or the keyboard can be used in conjunction with an application such as Reason, allowing students to access an entire composing and arranging environment from within the computer (see p.10). Connected to a sound module, the keyboard can also be used in standalone mode for performance-based activities.

Powered by USB, batteries or external power supply, keyboard controllers can take up less space in the classroom or lab, and are easily portable. Easy-to-install drivers allow set-up in minutes, so students can be up and running as soon as the lesson starts and can work anywhere in the school if the occasion arises.

There's no need for a separate MIDI interface. Connect directly to the computer via the USB input, or use the dual MIDI outputs for directly controlling external devices in a performance situation or for routing MIDI messages from the computer to an external sound module for playback of sequencer tracks and more.

With easy-to-handle controls, students can experiment with generating pitch bend, modulation, MIDI volume and other messages. For more advanced work, rotary controls and sliders can be used to introduce the concept of assigning MIDI parameters from either a software program, or a hardware synth for recording, automation and live performance control. No navigating complex menus — information can be programmed and assigned by simply pressing the keys.

As an alternative to using the mouse, students can program drum and other tracks in real time, using the keyboard's rotary controls to adjust the feel and dynamics. Or they can use these, along with sliders, for assigning software mixer functions for "hands on" control of volume, EQ, effects sends and other parameters. It's enough to keep even the most adventurous class member occupied.



## Radium61 61-key USB MIDI Controller

For student performance activities, keyboard class or any teaching situation where you need access to more keys, Radium61 gives you a standard 5-octave keyboard that will fit most popular music performance requirements, and can be extended by a further +/-3 octave transposition facility.

In addition, 8 MIDI-assignable sliders and 8 rotary controls allow you to map a variety of hardware and software parameters for real-time performance control of synth parameters, or for “hands on” control of virtual faders when mixing.

From basic keyboarding skills and music making with younger students, to more sophisticated programming and performance requirements, Radium provides an ideal solution that won't easily be outgrown.

61 keys (+/- 3 octave transposition)

built-in USB MIDI interface — dual MIDI outputs

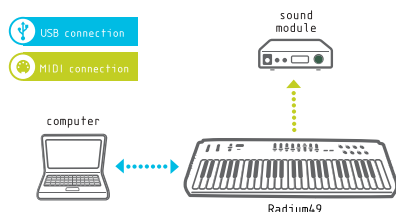
8 MIDI-assignable sliders

8 MIDI-assignable rotary controls

sustain pedal input

powered by USB or DC power adapter

compatible with: Windows 98SE, Me, 2000, XP Mac OS 9.2.2 or later (using OMS 2.3.7 or later) Mac OS X or later



## Radium49 49-key USB MIDI Controller

If classroom or lab space is an issue, but you still want the functionality of the Radium61 controller, Radium49 provides the same facilities with just an octave fewer keys.

The 8 assignable sliders and 8 rotary controls remain, along with the built-in MIDI interface. Slightly more portable, this model will also run on batteries in addition to USB and AC-power, providing a further option for performance-based activities.

49 keys (+/- 3 octave transposition)

built-in USB MIDI interface - dual MIDI outputs

8 MIDI-assignable sliders

8 MIDI-assignable rotary controls

sustain pedal socket

powered by USB, batteries or DC power adapter



### Why not mix and match?

If you need several keyboards, why not consider more than one model? Assigning MIDI parameters and making USB and MIDI connections is done in a similar way on the Radium61, Radium49, Oxygen8 and M-Audio Ozone. So once your students have mastered the basics, changing to a different keyboard still means they can work in a familiar way with similar controls. Meanwhile, you have more options for deploying your resources over a wider range of teaching activities!

# Expanding into Audio

## M-Audio Ozone USB Audio/MIDI Workstation

Expanding your music lab? If you've previously worked mainly with MIDI, upgrading to the M-Audio Ozone will add a new dimension to your students' work. With the same intuitive interface and rotary controls found on the Oxygen8, M-Audio Ozone gives your students the additional capability of recording audio directly into the computer via a 2 x 2 built-in 24-bit/96kHz audio interface.

Add vocals to a MIDI backing track via the mic input, which has a built-in preamp with phantom power. Simply plug in the mic, check the level in your recording software, adjust using the gain control on M-Audio Ozone and go! An additional line level instrument input is ideal for recording electric guitar, bass or keyboards. You can record using both audio inputs at once.

An additional stereo aux input gives further possibilities for recording a stereo signal from a drum machine, CD or sound module (if you want to record the output as an audio track for example.) Work with headphones, or connect the M-Audio Ozone outputs to powered monitors, a mixer, CD-R or Minidisc machine.

M-Audio Ozone is a great way of introducing basic audio recording concepts. With a larger teaching group, it also means that students can experiment with recording individual ideas, without having to wait for the main studio equipment to be available.

M-Audio Ozone's compact size is ideal for most individual workstation set-ups, or for integrating in a 19" inch rack in the studio. And of course you still have the ability to control the same MIDI parameters as before, or use M-Audio Ozone in a live performance situation.

25 keys (+/-4 octave transposition)

8 MIDI-assignable rotary controls

built-in USB MIDI interface - dual MIDI outputs

sustain pedal input

built-in 2 x 2 24-bit/96kHz audio interface

mic input (XLR) with built-in preamp and phantom power

instrument input (balanced 1/4" TRS)

stereo aux in (unbalanced 1/4" TRS)

stereo out (unbalanced 1/4" TRS)

stereo headphone input

zero-latency direct monitoring



### Minimum system requirements:

**Windows:** 98SE, Me, 2000, XP. For 96kHz operation; Pentium III 500MHz with 128MB RAM.

**Macintosh:** OS 9.2.2, OS X 10.1.5 or later. OMS under OS9 (included). For 96kHz operation; G3 or G4 with native USB and 128MB RAM.



### Lab Packs

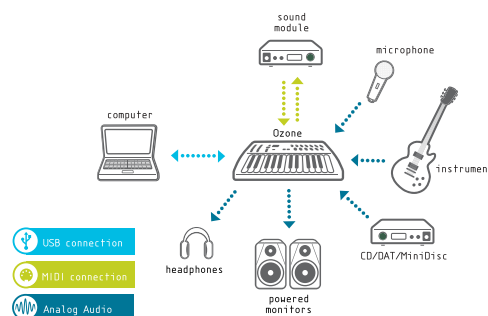
Oxygen8, Radium, Radium49 and M-Audio Ozone are also available in lab packs of 3 and 5 units. For larger quantities, please talk to your distributor or educational stockist.

## Studio Pack

carry your studio on your back



M-Audio's padded ballistic nylon Studio Pack conveniently carries on Ozone/Oxygen8, a laptop and accessories.



## What the Educators Say

### **“I can recommend M-Audio gear as being reliable, rugged and user-friendly ....”**

Graham Weir is Acting Head of the School of Music at Napier University in Edinburgh, Scotland. With a long history in Music Technology, having been a member of techno-pioneers OMD before following a career in education, Graham is well known as an evangelist for technology in music education. When not involved in curriculum developments, he spends time with teachers and lecturers advising on software and hardware:

“Teachers often don’t have the time to investigate all the options,” he says, “and they value informed advice from professionals. As someone who has a foot in both the education and industry sectors, I can recommend M-Audio gear as being reliable, rugged and user friendly and, of course, teachers like to know that it’s the industry standard.

“I have an M-Audio backpack, with a G4 Powerbook, an Oxygen8 and a Duo USB interface that I use for demoing software such as Cubase SX and Reason, and it’s never let me down! The backpack is just a little too heavy for cabin baggage however, so my next purchase is an M-Audio Ozone to replace the Duo and Oxygen8 combination. They think of everything!”

### **“A simple low-cost solution that supports our students’ learning needs.”**

Recognizing the increasing importance of technology in the lives of all musicians, and particularly its value in supporting the learning process, Berklee College of Music recently began requiring all entering students to purchase a laptop computer bundle that includes hardware and software specifically chosen to enhance their experience at Berklee. Included in this bundle is an M-Audio Oxygen8 keyboard and an adapted version of Propellerhead Reason. This provides every student with a musical keyboard and sound generation tool that can support their core music studies.

“Our core curriculum includes a first semester introductory course in music technology that prepares students with fundamental technical knowledge and practical training in the use of their new music hardware and software. This allows teachers of other courses to consider the potential enrichment of their own specific curriculum, incorporating new tools and capabilities shared by all students. Faculty can begin to develop classroom experiences and homework assignments that utilize these technologies in broad support of student learning.

“The Oxygen8 is small and portable, and well designed for easy musical input to the computer. With octave shift keys, and controllers for the sound generation engine in Reason, students have an easy way to play and hear their music. It is a low-cost, simple solution that supports our students’ learning needs. With their laptop computers, and the Oxygen8 connected and powered by a single USB cable, our students have access to quick and convenient tools for immediate musical problem solving and capture of creative ideas.”

*Berklee College of Music, Boston MA, USA*

# Desktop Accessories

## USB MIDI Interfaces

If you're already working with sound-generating MIDI keyboards, but are perhaps upgrading older computers in a music classroom or lab, you may need to review your MIDI interface compatibility. Almost all recent Windows PC and Macintosh computers are equipped with one or more USB (Universal Serial Bus) ports. In addition to connecting printers, mice and other peripherals, the USB ports are commonly used for connecting a MIDI interface to link keyboards or sound modules to the computer.

The following interfaces are ideal for classroom use. Space-saving and powered directly from the USB port, they can be plugged or unplugged from the computer at any time (even while powered up), moved from one workstation to another, and used with laptop computers. Compatible with both Windows PC and Macintosh platforms, they provide a practical and economical solution for both single computers and multiple workstations.

### USB MIDISPORT 1x1

1-in/1-out USB Bus-Powered MIDI Interface

A 1-in/1-out interface for simple and straightforward connection of a keyboard and/or sound module to the computer. Ideal for desktop use.

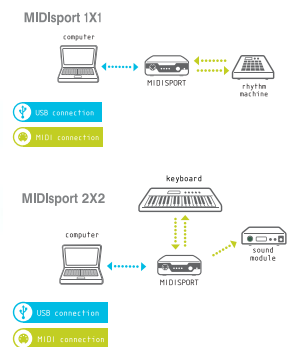
1-in/1-out MIDI interface (allowing up to 16 MIDI input channels and 16 MIDI output channels)

designed for use with Windows PC and Macintosh computers

requires no external power supply — powered from the computer's USB bus

compatible with Windows 98SE, 2000, Me, XP. Macintosh OS 9.2.2 or later (requires OMS 2.3.7 or 2.3.8)

6' USB cable included



### USB MIDISPORT 2x2

2-in/2-out USB Bus-Powered MIDI Interface

For workstations containing more than one keyboard or sound module, this interface provides up to 32 discrete MIDI input and output channels, giving your students greater flexibility. A simple MIDI Thru push button also allows direct access of a separate sound module from a keyboard controller while the computer is switched off—without the need for any re-wiring. Perfect for a music lab that is in constant use for a variety of activities.

2-in/2-out MIDI interface (allowing up to 32 MIDI input channels and 32 MIDI output channels)

designed for use with Windows PC and Macintosh computers requires no external power supply - powered from the computer's USB bus

MIDI Thru button for direct access of sound modules from a keyboard, even when the computer is switched off

compatible with Windows 98SE, 2000, Me, XP. Macintosh OS 9.2.2 or later (requires OMS 2.3.7 or 2.3.8)

6' USB cable included



#### Need more ins and outs?

Perhaps your students need to be able to drive several modules from just one or two controllers, or are into programming synth data in the computer. Here, multiple input and output ports can be advantageous in avoiding potential delays resulting from chaining devices together via MIDI Thru sockets, and enabling the efficient transfer of Sys Ex data.

For details of further products in the USB MIDISPORT line, such as the USB MIDISPORT 4x4 and the USB MIDISPORT 8x8/s (USB MIDI interface with SMPTE), see [www.m-audio.com](http://www.m-audio.com)



## MultiMixer 6 Desktop Line Mixer

Whatever your teaching set-up, you may find yourself needing to quickly link several pieces of equipment without the need for major re-wiring! This simple 6-channel line level mixer, complete with gain and pan controls, has a variety of applications at every educational level.

In secondary level or high school music classes, this is an easy way of linking keyboards, drum machines and other devices to powered monitors, so that a group of students can work together on a composition, or perfect a performance.

In the music lab, MultiMixer 6 is an ideal tool for linking workstation resources such as keyboards, sound modules and CD players. Work on headphones, or connect the outputs to powered monitors (see p.17).

Because it's compact and portable, the MultiMixer 6 is also a great rehearsal tool. Need to learn a guitar part for band class? Plug a CD player into the MultiMixer, along with an electric guitar (or output from an electric guitar effects box), and play along to the track. Using the headphone input, students can practice without disturbing others!

Recording or overdubbing in the school studio? MultiMixer 6 is perfect for creating headphone mixes. Simply connect from the multitrack or computer outputs and set the gain controls to emphasize drums, bass, "click" or whatever's needed to achieve the perfect take!

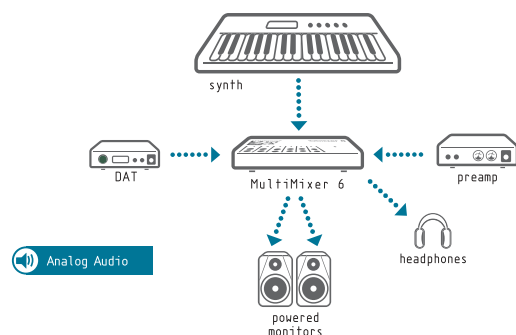
6 channels with gain and pan controls

1/4" input and output jacks (unbalanced)

1/4" headphone jack

frequency response: 5Hz to 100kHz, +0, -1dB

compact size (6" x 3" x 1")



City College in Coventry, England, has a large music department where 120 full time students have access to 7 well-equipped studios and 2 computer music suites.

"We have been through a very busy summer installing new equipment," says lecturer Craig Clarke "and have 18 PC workstations running Reason 2.5, and Radium49 controllers. From an education perspective, Reason is the perfect tool for teaching music technology. Only a few years ago, subjects such as sampling and synthesis would involve a large group of students gathered around a single rack of equipment. Using Reason allows each student to have their own rack of equipment which can be fully adapted to suit the lesson purpose - all this at a fraction of the cost of the equivalent hardware.

We have also invested in copies of Ableton Live and ArKaos VJ for the four project studios that students are working with to produce music technology performances. I have been really impressed with Live, it is such a simple program to use and produces instant results, and with Arkaos in tandem to produce the visuals, I am already looking forward to an exciting gig at the end of the year.

On a personal level, I have invested in an M-Audio Ozone controller to complement my laptop PC. I used to carry around my entire set of lesson files on CD and copy them onto the classroom computers. Now I just plug in my laptop and M-Audio Ozone and everything is ready to go."



**What happens if I buy a basic interface to start with, then decide to expand a workstation later?**

Starting off with more basic MIDI interfaces doesn't have to prove a limiting factor in the long run. As you add more MIDI hardware to a workstation, you could also add as many additional USB MIDISPORT interfaces as you have available USB ports on the computer, thus increasing the number of input and output channels.

# Software



## The computer-based studio: bringing professional production tools to the music class.

Developments in both software synth technology and audio recording have made the computer-based studio a realistic option for education.

In addition to our own hardware, M-Audio also distributes a collection of leading software products. Turn even the most basic classroom set-up, with just a computer and MIDI keyboard controller, into a standalone music production system, complete with a range of ready-to-go sounds, samples and loops. Save on space and avoid the hassles associated with physical wiring and cables.

In a larger music lab set-up, each student can have an individual workstation with a complete range of software production tools. No waiting to borrow sound modules and samplers, wasting valuable class time. Lab packs make equipping multiple workstations a more affordable option. Aside from the practicalities, the computer-based production studio is fast becoming the standard working tool of many leading artists and producers. So why not introduce your students to the same powerful and flexible working conditions that they can continue to enjoy in the future?

## Ableton Live The Audio Sequencer That's Also an Instrument

There are lots of audio recording and sequencing applications on the market, so what makes Live completely different, and how can it fit in with your teaching requirements?

### Audio elasticity

This is a sequencer that lets you build up arrangements by simply dragging audio clips or complete files into the Arranger View. But what's really clever is its ability to automatically adjust the timing of the audio to fit the set tempo, without the need for physical time stretching. This means that you can use favorite clips or loops from a variety of sources, without worrying about whether they'll all fit together—Live sees to that.

What's more, the audio can be transposed (independently of the tempo) to fit the pitch of the song. So for teaching situations where you simply want to concentrate on making music, Live introduces students to basic manipulation of audio material using simple drag and drop techniques, enabling them to create arrangements in minutes. They can also record their own audio performances and clips, quantizing these to fit the main groove of the song, and of course editing the recorded material afterwards as required—even changing tempo and pitch after the event.

### Top-quality processing and audio manipulation

With a variety of effects and processing, a mixer section, automation and visual editing of different track parameters, more advanced students can take their work to the next level. Live has all the facilities you would expect from a top-quality audio application, plus a few extras, such as DJ-type crossfading for smooth transitions between clips on different tracks. More advanced options for syncing loops and manipulating grooves also allow you to incorporate lengthy pieces of audio, or uncut loops into an arrangement with perfect tempo matching. With Live's new clip animation features, loop variations can be created from static samples, adding yet another dimension to student music production. Clips can also be mapped to keyboard ranges for chromatic playing.

### Live performance

Working in a linear style is only one aspect of Live. A separate Session View lets you build up clips and loops into "scenes," or song sections, which can be triggered in real time by the mouse or a keyboard controller. Not only is this a great way of teaching musical form and structure, it also allows Live to be used as a real-time performance resource for improvising, band work and any situation where students need to have musical flexibility. You can even audition and add clips to scenes during a live performance, without disturbing the flow of the material, or the performance itself.

### A great partnership

Live makes a great workstation and performance partner for Propellerhead Reason (see the following page), with opportunities to sync the programs together, providing the best of both audio and MIDI worlds.



#### Ableton Live (Minimum Requirements)

400MHz PC or faster; Windows 98, 2000 or XP;  
Windows compatible soundcard (preferably with  
a DirectX or ASIO driver); 128MB RAM

Mac G3 or faster; OS 9.2.2 or later

Mac OS X 10.1.5 or later; 256MB RAM

## Propellerhead Reason

A Complete MIDI Composing and Arranging Environment



Reason provides a range of resources for creating a complete MIDI composing and arranging environment within the computer. A virtual studio rack contains a selection of sound devices including synths, samplers, a drum machine, loop players, a mixer, a variety of effects and processing units, pattern-based sequencers and a main detachable sequencer for putting musical ideas together.

### Start simply

Intuitive enough to get results in minutes, yet complex enough to cater to the most advanced musical demands, Reason's flexibility allows students to work at a number of different levels according to age and experience. A great introduction to sequencing for high school or secondary level students, Reason's rack can be customized to gradually introduce different devices. Experiment with sounds and textures, create patterns and rhythms. Record and shape material, introduce note editing, explore dynamics and "feel." Gradually progress to controller use and parameter automation for added realism. Simply hit Record, adjust the front panel controls on the devices in real time, and make more detailed edits afterwards. Configurations and settings are saved with each song, so several students can work on the same computer without the hassles often experienced with hardware-based workstations.

### More technical teaching

For college courses, Reason can be more than a creative music production system. Introduce sound synthesis via practical manipulation of device parameters. Teach signal flow and routing by patching the hardware at the rear of the rack via virtual cables—a simple key press lets you flip between the front and back of the rack. Explore more advanced principles of effects use, EQ, compression and mixing techniques. Add as many devices to the rack as your processing power can support.

### Export options

With song export available in both audio file and standard MIDI file formats, Reason is a great choice for creating coursework and assignments. More adventurous students can even publish their compositions on the Web.

Reason comes with an extensive library of sounds in a variety of formats, but you can also load your own custom samples and REX2 files (see "Propellerhead ReCycle") into the different sound devices, or explore top-quality sample collections such as ProSessions (see p.13).

### ... and Performance Resource

In addition to its creative capabilities, Reason's sonic qualities have also made it an onstage choice for several leading artists. So in addition to producing great music in the lab, your students can also explore the possibilities of using a laptop, keyboard controller and Reason's sound modules in live performance, keyboard class, or for studio recording activities.



### What if my students want to add audio to their Reason songs?

Let's suppose your students have created a MIDI backing track of their current chart favorite and now want to add vocals and/or live guitar. This is where Propellerhead's renowned ReWire technology comes in, allowing you to link Reason with other ReWire-compatible programs such as Ableton Live, Cubase SX or Emagic Logic.

With some simple "rewiring" in the Reason rack, both software applications will play together in perfect sync, with Reason acting as a "slave" to the audio recording program. The Reason tracks will also appear in the mixer section of the audio program, allowing students to mix and process these alongside their newly recorded audio.



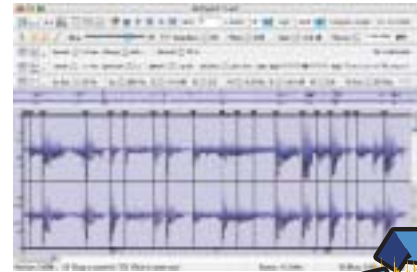
## Propellerhead ReCycle!

The Ultimate Tool for Editing Loops and Grooves

ReCycle! heralded a new era in audio production when Propellerhead's revolutionary technology allowed loops to be played back at any tempo, without altering the pitch.

A continuing favorite with many higher education institutions, ReCycle! analyzes an audio file, slices it into individual rhythmic components, and saves it as a REX2 file, which can then be loaded into Reason and other compatible applications such as Cubase SX. It's a great tool for dance music and DJ courses, where students can create their own looped material.

ReCycle! is also an excellent audio analysis tool; individual loop sounds can be extracted, replaced, retuned and processed. Quantize a loop and apply a particular groove, or extract the loop timing to



## ProSessions Sound Libraries

Inspirational Ideas for Instant Creativity

If you're working with Live, Reason or other applications that use AIFF, WAV, REX or Acidized WAV formats, this is a great resource for composition and arrangement activities at any level. Covering a variety of musical styles, each volume in this constantly growing series contains samples in multiple formats for both Windows PC and Macintosh platforms. In addition to loops, grooves, beats, breaks, one-shots and melodies, some CDs in the series also include song section material—intros, bridges, verses, choruses and fills. Ideal for teaching and analyzing song structures and styles.



### Titles include:

**Discrete Drums 1 & 2:** Drum song sections, matching percussion loops and individual samples

**These Drums Are Loud:** Standard pop and rock grooves, plus song sections and variations

**Worldbeat Cafe:** Caribbean and Brazilian rhythms, with grooves and variations to build song sections

**Latin Element:** Latin loops using authentic instruments and rhythms

**Hydrosonix 1 & 2:** Progressive mixes of hip-hop, trip-hop and R&B

**Hella Bumps 1 & 2:** Essential tools for composing hip-hop and rap

**Electro Crash:** Analog sounds, loops and effects, created exclusively with vintage analog synths and drum machines, analog and digital sequencers, CV and Gate converters

**AdrenaLinn Guitars:** Guitar playing, editing and processing using Roger Linn's AdrenaLinn processor

### ReCycle! (Minimum Requirements)

Pentium 66MHz or faster; Windows 98, NT, 2000 or XP; 16-bit Windows-compatible audio card.

Power Mac; OS 8.6 or later

CD-ROM drive

### Reason (Minimum Requirements)

Pentium II/233MHz or better; Windows 98, Me, 2000 or XP; 16-bit Windows compatible audio card (preferably with DirectX or ASIO driver); 64MB RAM.

Mac 604/604e/G3/G4/166MHz or faster with OS 9 or OS X 10.1 or later on any OS X-compatible Mac; 128MB RAM.

CD-ROM drive

256-color monitor with 800x600 resolution or better - MIDI interface and MIDI keyboard (recommended)



## Audio Interfaces Expanding Your Recording Capabilities

### Quattro USB 4-in/4-out Mobile Audio/MIDI Interface

Compact, portable and easy to use, the Quattro is suitable for recording line level sources such as keyboards, drum machines, guitar processors and active acoustic guitars—in the music lab, or anywhere else in the school. No internal computer installation is required.

Record up to 4 mono or 2 stereo sources simultaneously onto separate tracks of your recording software. (Input gain is selectable in stereo pairs for simultaneously recording 2 sources with different line levels). Connect the 4 switchable outputs to a separate mixing console, or use 2 outputs for a stereo send to powered monitors.

A 1-in/1-out MIDI interface adds further potential: Input data from a MIDI keyboard into the computer via the MIDI In. Connect the MIDI Out to a sound module and audition different timbres for your recorded track. Connect the outputs from the module to your powered monitors, or use them to record the output of the module as an audio track, via the Quattro inputs.

Add a mic preamp and expand the recording potential to include vocals and other miked instruments. For even greater connectivity, consider adding an Omni i/o—see p.14 for more details.



up to 24-bit/96kHz operation using 2-in or 2-out (16bit/48 kHz operation with 4-in/ 4-out)

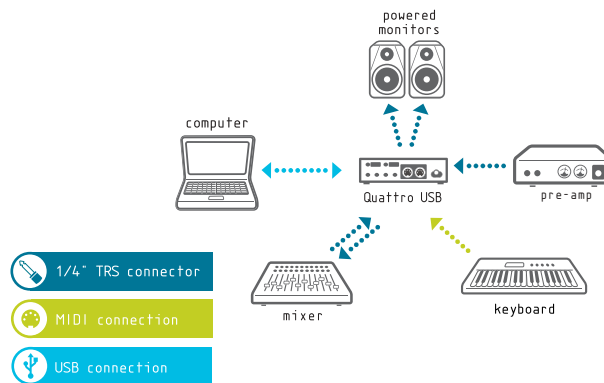
4-in/4-out analog I/O

1 x 1 MIDI I/O

near zero latency direct monitoring in stereo pairs

input gain selectable in stereo pairs +4dBu/-10dBv

expandable via Omni i/o



### USB, FireWire, or PCI

As your students' skills develop, they may require more than the standard stereo inputs and outputs offered by some sound cards. A range of USB, FireWire and PCI interfaces is available, but which is best for your particular teaching requirements?

In general, if you are working with student laptops, or need an interface that can be transferred from one workstation to another, both USB and FireWire offer plug-and-play facilities. For more permanent installation within the computer, the Delta range of PCI cards offers a viable alternative.

#### But what else do you need to consider?

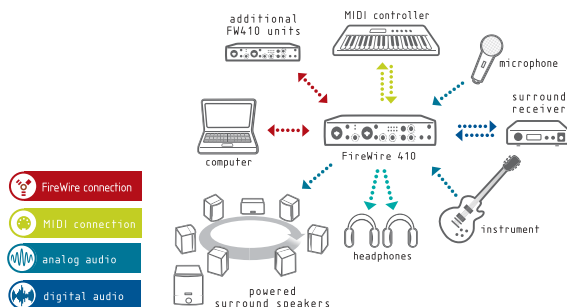
Each of these protocols has its own bandwidth, which determines how much audio can be transferred at once. A greater bandwidth allows you to record more tracks simultaneously, so if recording multiple tracks in the school studio is a requirement, PCI will give you a transfer rate of 132MB per second. However, if your students tend to record one or two tracks at a time, the FireWire transfer rate of 30MB/sec or USB at 1.5 MB/sec will most likely meet the majority of their recording needs.

## FireWire 410 4-in/10-out Mobile Audio/MIDI Interface

If your students tend to record tracks one at a time but want the option of sending individual audio tracks from the computer to different analog mixer channels, the multiple outputs on the FireWire 410 provide an extremely flexible solution. The FireWire 410 offers the opportunity to work with surround sound, with the outputs directly driving up to 7.1 surround without a decoder.

Featuring mic/line inputs, a built-in preamp and phantom power switch, the FireWire 410 is the ideal solution for capturing an ambient stereo recording in the school theater, or for doing guitar or vocal overdubs away from the studio or lab.

Portable, with high-speed FireWire ports and two headphone outs with individual level controls, a student producer and musician can easily work together in a quiet corner without distracting the rest of the class.



24-bit/96kHz I/O (192kHz stereo output)

2 analog input channels, each with:

- mic/line inputs (balanced XLR and unbalanced 1/4")
- preamp with level control
- signal/clip LEDs and an available 66dB gain
- phantom power
- 20dB pad

8 line outputs

stereo monitor level control

2-channel S/PDIF digital I/O

1 x 1 MIDI I/O with bypass for standalone operation

2 headphone outs with individual level controls

2 FireWire high-speed ports

AC3 and DTS surround sound support via digital output

analog outs can directly drive up to 7.1 surround, using included software bass management

## Delta 66 6-in/6-out PCI Audio Card with Digital I/O

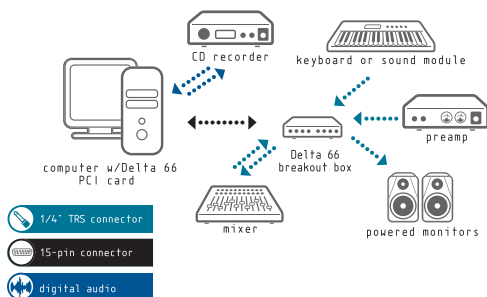


Due to the extra bandwidth available with PCI, the Delta 66 audio card allows simultaneous use of its 4 analog inputs (for recording line level devices) at 24-bit/96kHz quality, giving your students the highest quality audio.

Additional 2 channel S/PDIF I/O is great for recording material from CD or Minidisc (keeping it entirely in the digital domain), and for mastering direct to DAT or CDR, with SCMS copy protection control. Ideal for producing student demos or high-quality coursework.

A practical desktop breakout box means that once the card is installed in the computer, all subsequent connections can be handled right from the desktop—perfect for a busy music lab where different workstation configurations are frequently used.

Adding a mic preamp extends the possibilities for recording more instruments or vocals. For even greater connectivity, check out the possibilities of adding an Omni i/o—see p.14 for more information.



24-bit/96kHz full duplex audio interface

4 x 4 analog I/O (balanced/unbalanced 1/4" TRS)

2-channel S/PDIF digital I/O (with SCMS copy protection control (coaxial))

36-bit internal DSP digital mixing/routing with comprehensive software control

AC3 and DTS surround support via digital I/O

expandable via Omni i/o

## Audiophile 2496 4-in/4-out PCI Audio Card with MIDI and Digital I/O

Ideal for the more permanent desktop workstation, the Audiophile 2496 contains all the elements you need for high quality results—all at an affordable price.

2 x 2 RCA I/O jacks allow input of line level sources such as drum machines or sound modules. If students wish to record additional sources such as vocals or guitar, an additional mic preamp or small external mixer (with integrated mic preamp) can also be used in conjunction with these inputs. Analog outputs enable recorded material to be routed to powered monitors or external mixer channels for further production work.

The S/PDIF ins and outs are ideal for working with additional CD or Minidisc material and also allow direct mastering entirely in the digital domain, with added SCMS copy protection control. A 1-in/1-out MIDI interface provides the final link to integrating all the components of the lab workstation via a single high quality PCI card installed in the computer.

### 24-bit/96kHz full duplex audio interface

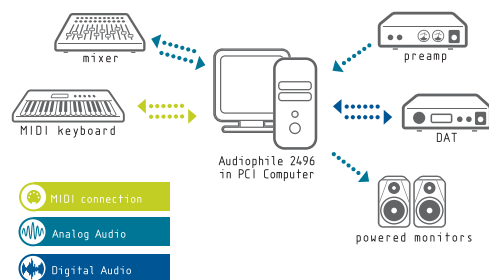
2 x 2 analog I/O (unbalanced gold-plated RCA jacks)

2-channel S/PDIF digital I/O (with SCMS copy protection control (coaxial))

36-bit internal DSP digital mixing/routing with comprehensive software control

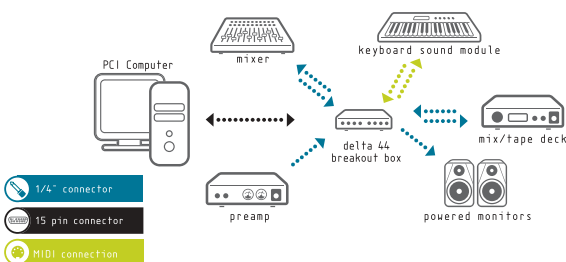
AC3 and DTS surround support via digital I/O

1 x 1 MIDI I/O



## Delta 44 4-in/4-out PCI Audio Card

For more limited budgets, the Delta 44 offers 4 x 4 analog I/O, and 24-bit/96kHz quality, but without the S/PDIF I/O, AC3 and DTS surround support of the Delta 66. Also expandable via the Omni i/o.



### Audio Interfaces - Minimum System Requirements

#### USB Audio Interfaces

##### PC

Windows 98SE, Me, 2000 or XP

For 96kHz operation: Pentium III 500MHz with 128MB RAM

For 48kHz operation: Pentium II 400 with 64MB RAM

##### Mac

OS 9.2.2, OS X 10.1 or higher

For 96kHz operation: G3 or G4 with native USB, 128MB RAM

For 48kHz operation: G3 or G4 with native USB, 64MB RAM

#### Delta PCI Interfaces

##### PC

Windows 98SE, Me, 2000 or XP

For 96kHz operation: Pentium III 500 MHz with 128MB RAM

For 48kHz operation: Pentium II 400 with 64MB RAM

##### Mac

OS 9.2.2, OS X 10.1.5 or higher

For 96kHz operation: G3 or G4 with 128MB RAM

For 48kHz operation: G3 or G4 with 96MB RAM

## OmniStudio USB The Complete PCI Desktop Studio

There are a number of scenarios where a more portable studio facility can provide additional working opportunities for your students. Even if there's a permanent studio installation in the school, the OmniStudio USB's portable design offers additional functionality in the music lab, and facilitates recording or performance activities in other areas of the school—even on location for more advanced student projects.



In a more basic class setup, with limited space for mixing desks and other hardware, OmniStudio USB can turn a modest workstation (with perhaps a MIDI keyboard controller, sound module, effects unit and powered monitors) into a complete recording, mixing and mastering environment. It's easy to store when not in use, and is simple to connect to suit different configurations of recording equipment, monitoring and mastering resources.

Featuring 4 x 4 analog I/O, 2 mic/instrument preamps, 2 line inputs, 4 direct outputs, separate stereo monitor and record outs, and effects send/returns—all controlled via an onboard DSP mixer—this is a resource that will not easily be outgrown by students of any age. Record vocals, guitars and keyboards for composition and performance activities, or playback loops and samples for DJ course applications. Simple enough for an introduction to microphone recording (with a cool 60dB gain, phantom power and 20dB pad), and caters to many different teaching situations.

With two independent stereo headphone outputs, the OmniStudio USB is an ideal resource for student project collaboration, and for practical teacher/student tutorial work.



### audio/MIDI interface features

up to 24-bit/96 kHz performance

4-in/4-out audio I/O

2 mic/instrument preamps with phantom power and 20 dB pad

2 line inputs

4 direct outputs

1-in/1-out MIDI I/O

fits in standard 19" rack using removable rack ears

### built-in mixer features

14-channel line mixer with effects send/return

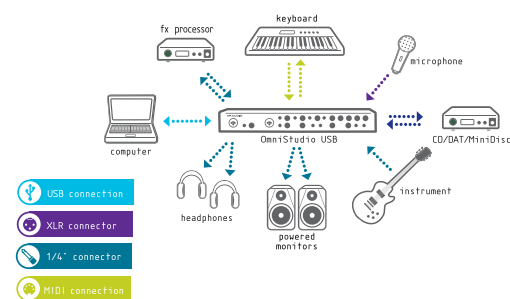
4 stereo aux inputs routable to mixer or record inputs

stereo monitor out with level control

stereo record out

near zero-latency direct monitoring system

2 stereo headphone outputs with individual controls



### USB Recording Configurations

16-bit/44.1kHz	4-in/4-out
24-bit/44.1kHz	4-in/2-out
	2-in/4-out
24-bit/48kHz	4-in/2-out
	2-in/4-out
24-bit/96kHz	2-in or 2-out



**My departmental budget is limited and I'm worried about buying an interface we can afford now that might only meet our needs for a short time..**

One of the chief advantages of interfaces such as the Quattro and Delta 66/Delta 44 is their capacity for expansion. These particular models are compatible with the Omni i/o, an expansion box that adds mic/instrument preamps, additional aux ins, direct outs and a host of other features, expanding the basic interface into a serious desktop studio resource. Alternatively, you could consider expanding the recording capability of the original interface by simply purchasing a separate mic preamp, such as the Audio Buddy (see p.15 for more details).



# Preamps

## Audio Buddy Microphone Preamp and Direct Box

For students who are quite new to audio recording, or who want the option of recording occasional vocals, guitar etc in a predominantly workstation-based environment, Audio Buddy provides a good quality, cost effective and easy to set up solution. Its stand-alone design and small size also means that it can easily be moved to different workstations in the lab, depending on individual projects in hand. Or of course, used in conjunction with a laptop and Quattro, it's a great location recording resource for capturing out-of-school concerts and recitals.

2 independent preamp channels let you record a vocal duet, voice and miked acoustic guitar, or make a stereo ensemble recording. Each channel also has a high impedance instrument input, ideal for electric guitar and bass overdub work for example.

The controls are simple, just a gain knob and signal/clip LED on each input channel to make sure that there's no signal overload, plus a phantom power switch for use with condenser mics. This makes Audio Buddy ideal as a tool for teaching basic microphone recording techniques.

2 independent preamp channels, each featuring:

- mic input (balanced XLR) with phantom power switch and indicator
- high impedance instrument inputs (1/4" unbalanced)
- gain control
- signal/clip LEDs
- professional line output (balanced/unbalanced 1/4" TRS)

+48V phantom power

frequency response: 5Hz-50kHz, (+0/-3dB)

mic gain: 60dB

guitar gain: 40dB

guitar input impedance: 100Kohms



Microphones generate a low level signal, which generally is not sufficient to work directly with studio or computer recording devices. The signal therefore needs to be amplified to bring it up to the line level equivalent required for most audio interfaces, processors and other recording equipment. This is done using a mic preamp.

Some audio interfaces such as the M-Audio Ozone workstation, FireWire 410 and OmniStudio USB have integral mic preamps. However, if your current audio interface doesn't have an integral mic preamp, but you want the option of recording directly into the computer without first going through a hardware mixer, a simple solution is to connect your microphone to a standalone preamp, and connect the outputs of the preamp to the inputs on your audio interface or sound card.

## DMP3 Dual Microphone/Instrument Preamp and Direct Box

For more advanced recording work, the DMP3 offers a number of additional features that give a professional edge to student demo CDs, projects and assignments. A wide frequency response and impressive dynamic range allow students to make the most of 24-bit/192kHz audio interface and recording software capability.

In addition to an amazing 66dB of available gain, low-cut filters allow removal of unwanted hum and rumble, with a phase reverse switch on each channel enabling further refinement as needed.

Classic VU meters provide an interesting educational slant for students used to today's predominantly LED-based level monitoring, while at the same time providing an additional aid for optimizing levels.

A great partner for the Quattro and Delta 66/Delta 44 interfaces, DMP3 provides the highest quality and flexibility at a price that is realistic for many departmental budgets.



2 independent preamp channels, each featuring:

- mic input (balanced XLR)
- high impedance instrument inputs (1/4" unbalanced)
- high and low gain range controls for up to 66dB gain
- VU meter and clip LED
- low-cut filters for removal of unwanted hum and rumble
- gain control
- phase reversal switch
- professional line output (balanced/unbalanced 1/4" TRS)

phantom power

frequency response 20Hz-100kHz (+0/-1dB)

# Looking to Expand the School's Microphone Collection?

## Luna Large Diaphragm Condenser Microphone

The Luna microphone establishes M-Audio as a serious contender in the market. This professional, large diaphragm condenser mic is a perfect addition to the school studio, ideal for recording vocals, piano, and acoustic guitar for example.

In addition to warmth and clarity, its comparative affordability makes buying 2 a reality for drumkit overhead miking, or for capturing a live ensemble.

A vintage look and sound is combined with use of state-of-the-art Class A FET electronics (a quieter technology than that often found in solid state microphones), providing the best of both worlds.

Catering to long cable runs (up to 200 feet), and packaged with a shock mount and aluminium carrying case, Luna is suitable for both studio use and location-based student projects.



large diaphragm condenser mic

all brass capsule, 1.1" diameter evaporated gold diaphragm

cardioid polar pattern

20Hz-20kHz frequency response

phantom power requirement

+/-1dB tolerance across the entire frequency range

sensitivity: 16 mV/Pa (-36 dBV)

max. SPL for 0.5% THD: 130 dB

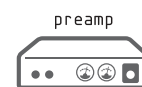
equivalent Noise Level: 14 dB (A weighted)

output Impedance: 200  $\Omega$

Class A FET, with output transformer

allows cable runs of more than 200 feet

packaged with shock mount and aluminium carrying case



Luna



## Solaris Large Diaphragm Multi-Pattern Condenser Microphone

The Solaris is an extremely versatile mic, offering 3 different polar patterns: cardioid, omni and figure 8. Combining the familiar M-Audio vintage look and sound with state-of-the-art Class A FET electronics, Solaris offers amazing flexibility and incredible sensitivity for its price.

large diaphragm condenser mic

all brass capsule, 1.1" diameter evaporated gold diaphragm

cardioid, omni and figure 8 polar patterns

20Hz-20kHz frequency response

48V phantom power requirement

+/-1dB tolerance across the entire frequency range

sensitivity: 16 mV/Pa (-36 dBV)

max. SPL for 0.5% THD: 130 dB

equivalent Noise Level: 14 dB (A weighted)

output Impedance: 200  $\Omega$

class A FET electronics, with output transformer

-10dB attenuation pad

low frequency rolloff switch (6dB per octave @125Hz)

packaged with shock mount and aluminium carrying case



Analog Audio

## Ensuring the future of music at Sitka Fine Arts Camp

Founded in 1973, the Sitka Fine Arts Camp in Sitka, Alaska has helped thousands of students grow in skill and appreciation of the arts by providing a variety of intensive classes in six different disciplines. With renowned instructors who are professionally active in the fields that they teach, the Sitka Fine Arts Camp offers a variety of courses in Music, Technology, Dance, Theater, Creative Writing and Visual Arts.

For the 2003 Summer Session, the Camp placed M-Audio's Radium61 keyboard controllers and copies of Propellerhead Reason 2.5 inside the music creation classrooms, putting the tools of today's audio professionals in the hands of tomorrow's creative geniuses.

"It is exciting to see the unbounded creativity of the students when using professional sound design equipment like Reason and and M-Audio's Radium keyboards," says Roger Schmidt, Director, Sitka Fine Arts Camp. "Giving young students the tools and resources to work as creative musicians ensures the future of music."



# Studio and Workstation Powered Monitors

## Studiophile LX4 2.1 system

Reference Monitors With Subwoofer

This ideal classroom or workstation system includes 2 desktop satellite monitors and a subwoofer.

The compact design of the two satellite monitors make them ideal for workstation use. Magnetically shielded drivers allow them to be placed near computers and other equipment without unwanted interference.



3-way studio reference with subwoofer 2.1 System, which can be expanded to 5.1

8" subwoofer driver

4" low frequency drivers

1" high frequency drivers

40Hz-20kHz frequency response

magnetically shielded for desktop use

dimensions: subwoofer: 15.75" (h) x 9.75" (w) x 12.25" (d).

L & R satellites: 8.5" (h) x 5.75" (w) x 6.75" (d)

## Studiophile BX5

75-watt, Bi-Amplified Studio Reference Monitors

Slightly larger, but still desktop friendly, the Studiophile BX5s have potential for both workstation use in the music lab and high-quality near-field reference monitoring in the school studio.

School labs, studios and classrooms don't always have the space and design for optimal placement of monitors, but the BX5s are specially designed to accommodate unavoidable placement in corners, near walls or by windows, which can affect the overall response.



Built-in Acoustic Space Control allows you to optimize the bass response to compensate for placement near walls. You can also adjust the high frequency response to compensate for reflective surfaces, and apply a mid-range boost for added flexibility.

Magnetically shielded, the monitors can be placed near computers and other workstation equipment without unwanted interference.

integral bi-amplified 75-watt active near-field monitors

low frequency drivers

1" silk high frequency drivers

Acoustic Space Control for optimizing performance in relation to placement

magnetically shielded for desktop use

dimensions: 9.85" (h) x 6.54" (w) x 7.88" (d)



## Need to expand your monitoring capabilities?

As with many M-Audio products, committing your budget to a particular specification still allows for expansion at a later date.

The monitoring power of the BX5s can be further expanded by adding the Studiophile SBX subwoofer, offering an additional 120 watts of bass response. Carefully controlled by a unique Stereo Bass Management system, the signal is split at a variable crossover frequency, so that frequencies below the split are routed to the subwoofer, while those above go to the main monitors.

The Studiophile LX4 2.1 combination has potential for surround sound work, with the availability of an expansion set of 3 additional passive satellite monitors. Create an easy-to-set-up 5.1 system by simply connecting to the existing subwoofer.

## Built-in amplification

Monitors (or speakers) tend to be available today in 2 main types: passive monitors, which require a separate amplifier to drive them, and active monitors, which contain built-in amplification. For many classroom applications, active (or powered) monitors provide a practical solution, since they are space-saving and easy to set up.



# Music Lab and Studio Systems

Hardware Solutions for a Variety of Teaching and Learning Situations

If you're undecided about how to make the most of your budget, check out the following hardware packages, which have been carefully selected to cater to a variety of classroom, lab and studio activities. Simply add these packages to a computer already set up with your favorite audio or MIDI recording software, and let your students unleash their creativity!

## M-Audio Ozone Compact USB Audio/MIDI Systems

Add an all-in-one keyboard controller, MIDI and audio interface to the computer, and start recording right away. It's ideal as an introduction to basic audio work, or as a starter solution to fit at the back of a music classroom with limited space. Of course, it's easily portable for those times when your students need to take the computer to another part of the school.

The basic system includes an M-Audio Ozone workstation and Luna microphone. You may also want the option of adding a set of powered monitors — handy when using the workstation for group demonstration or for checking student mixes.

### System A

M-Audio Ozone workstation

Luna microphone

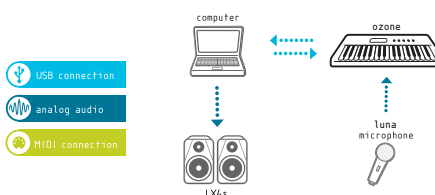


### System B

M-Audio Ozone workstation

Luna microphone

Studiophile LX4 2.1 powered monitors



## Quattro USB Audio/MIDI Systems

The basic system provides a sophisticated degree of MIDI control via the Radium49 keyboard controller, and the ability to record line level audio sources via the Quattro interface (that can be directly connected to professional quality desktop monitors). As students' needs develop, expand the potential of the system independently via an Omni i/o. Or, if your system needs to cater to a wide variety of student activities right now, consider the extended system which also includes an Omni i/o and Luna microphone.

You can connect as much or as little of this system as you need at any time, depending on the activity. Use the Quattro independently, or in conjunction with the Omni i/o. The BX5 desktop monitors can also double as studio near-field monitors. Input MIDI data via the Radium49, use the keyboard for live performance with a software synth, or assign MIDI parameters to its rotary controls and sliders for hands-on control of virtual faders and more.

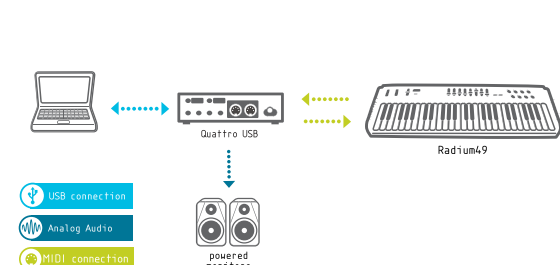
Also, you're not tied to one particular computer containing an internal sound card. This system can be connected to any computer inside or outside the school (after installing the required drivers). Flexible, portable and fast to set up, this system yields the highest quality results.

### System A

Quattro USB

Radium49 keyboard controller

Studiophile BX5 powered monitors



### System B

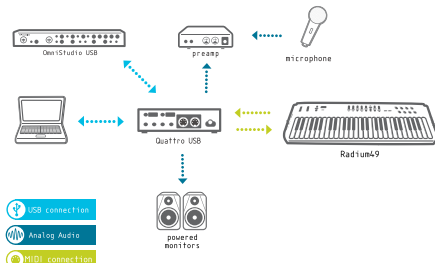
Quattro USB

Omnistudio USB

Luna microphone

Radium49 keyboard controller

Studiophile BX5 powered monitors



## Audiophile PCI Audio/MIDI Systems

With a high quality audio and MIDI interface installed in the computer, the basic Audiophile PCI system adds a keyboard controller and powered monitors to expand the computer into a powerful MIDI-based workstation. Use the Oxygen8 to input MIDI data, access softsynth sounds, or control a variety of MIDI parameters in real time.

Create a MIDI backing track. Sounds from your synth or sound module (triggered from your MIDI file) can be re-recorded as an audio file, ready for burning to CD.

The addition of a Luna microphone and Audio Buddy preamp extend the creative capabilities of the basic system. Simply plug the preamp into the Audiophile's inputs, connect the microphone, and you've opened a new range of possibilities for adding vocals, guitar and other instruments to turn your basic backing track into a finished song.

### System B

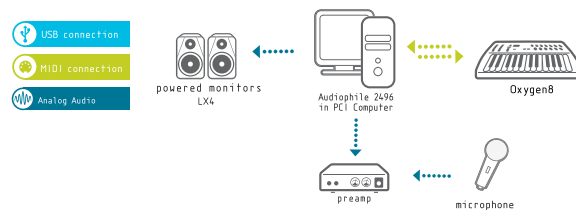
Audiophile 2496 PCI audio card with MIDI and digital I/O

Oxygen8 keyboard controller

Studiophile LX4 2.1 monitors

Luna microphone

Audio Buddy mic preamp

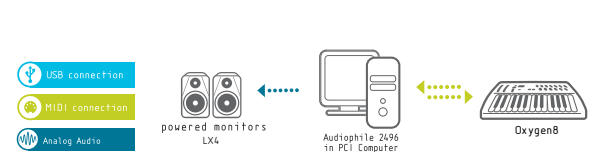


### System A

Audiophile 2496 PCI audio card with MIDI and digital I/O

Oxygen8 keyboard controller

Studiophile LX4 2.1 powered monitors



## Delta PCI Audio Recording Systems

This system is ideal for school recording situations where you need the option of working to the highest standards both inside and outside the school studio or music lab, but don't necessarily need MIDI functionality.

With the Delta PCI system, you can take the computer to the school theater and make an ambient stereo recording of a student (or visiting) ensemble. Back in the studio or lab, edit and refine the recording, using professional near-field reference monitors to ensure the best results for the final master.

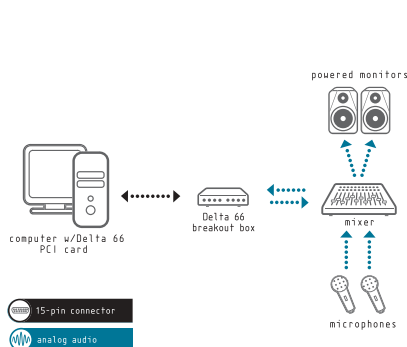
### System B

Delta 66 PCI audio card

mixing board

2 Luna Microphones

Studiophile BX5 powered monitors



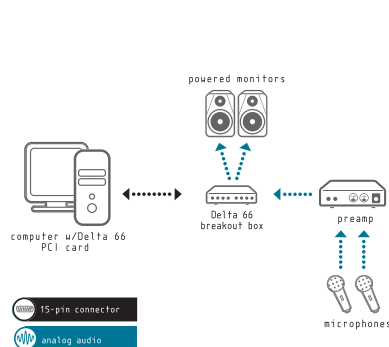
### System A

Delta 66 PCI audio card

DMP3 mic preamp

2 Luna microphones

Studiophile BX5 powered monitors



# FireWire 410 Audio/MIDI Systems

The FireWire 410 system is a high-quality solution for a variety of stereo recording and overdubbing projects both in and out of the school studio.

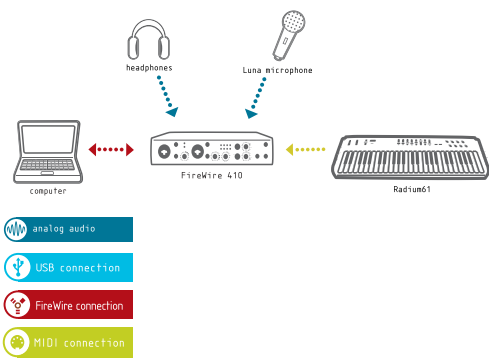
The portability of the FireWire 410 and its integrated mic preamp make it an ideal solution for no-hassle recording of vocals in the control room (using the included Luna mic), or for recording a guitar overdub outside the school. (The 2 individual headphone channels reduce potential monitoring hassles while on location.)

Connect the 5-octave Radium61 keyboard controller via the FireWire 410's built-in MIDI interface for efficient recording of keyboard lines in conjunction with a software synth. Or assign various MIDI parameters to the sliders and rotary controls, turning it into a real-time control interface.

The components of the basic package facilitate high-quality project work, where flexibility is of prime importance. This package can be further extended with the additional option of professional near-field reference monitors.

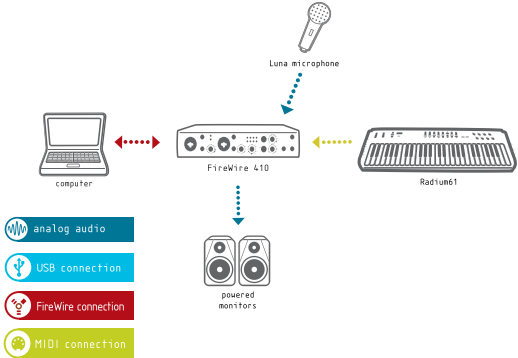
## System A

- FireWire 410 mobile audio/MIDI interface
- Radium61 keyboard controller
- Luna microphone



## System B

- FireWire 410 mobile audio/MIDI interface
- Radium61 keyboard controller
- Luna microphone
- Studiophile BX5 powered monitors



For more detailed product specifications, or information on other available interfaces, see [www.m-audio.com](http://www.m-audio.com)

## Where do I go next?

For more in-depth technical specifications and information on other M-Audio products, check out [www.m-audio.com](http://www.m-audio.com).

Your local M-Audio education reseller will also be pleased to assist you with any product queries (see contact details below).

Alternatively, M-Audio has offices in the following territories. Their staff will be happy to discuss your requirements, or refer you to the nearest retailer.

### M-AUDIO USA

5795 Martin Road  
Irwindale, CA 91706

Tel: 626-633-9050  
Fax: 626-633-9070

Web: [www.m-audio.com](http://www.m-audio.com)  
E-mail: [info@m-audio.com](mailto:info@m-audio.com)

### M-AUDIO Canada

1400 St-Jean Baptiste Ave., #150  
Quebec City, Quebec G2E 5B7  
Canada

Tel: (418) 872-0444  
Fax: (418) 872-0034

Web: [www.m-audio.ca](http://www.m-audio.ca)  
Email: [midimancanada@m-audio.com](mailto:midimancanada@m-audio.com)

### M-AUDIO U.K.

Unit 5, Saracen Industrial Estate  
Mark Rd  
Hemel Hempstead, Herts HP2  
7BJ  
England

Tel: 44 (0) 1442 41 6590  
Fax: 44 (0) 1442 24 6832

Web: [www.maudio.co.uk](http://www.maudio.co.uk)  
Email: [info@maudio.co.uk](mailto:info@maudio.co.uk)

### M-AUDIO France

Unit 5, Saracen Industrial Estate  
Mark Rd  
Hemel Hempstead, Herts HP2  
7BJ  
England

Tel: 0810 001 105 (Numéro Azur)  
Fax: 44 (0) 1442 24 6832

Web: [www.m-audio-france.com](http://www.m-audio-france.com)  
Email: [info@m-audio-france.com](mailto:info@m-audio-france.com)

### M-AUDIO Germany

Kuhallmand 34  
D-74613 Ohringen  
Germany

Tel: 49 7941 98 7000  
Fax: 49 7941 98 70070

Web: [www.m-audio.de](http://www.m-audio.de)  
Email: [info@m-audio.de](mailto:info@m-audio.de)

### M-AUDIO Japan

Annex Building 6F  
2-18-10 Marunouchi  
Naka-Ku, Nagoya 460-  
0002  
Japan

Tel: 81-52-218-3375  
Fax: 81-52-218-0875

Web: [www.m-audio.co.jp](http://www.m-audio.co.jp)  
Email: [info@m-audio.co.jp](mailto:info@m-audio.co.jp)

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